

BSI Standards Publication

Protective garments for motorcycle riders

Part 1: Test methods



BS EN 17092-1:2020 BRITISH STANDARD

National foreword

This British Standard is the UK implementation of EN 17092-1:2020. Together with BS EN 17092-2:2020, BS EN 17092-3:2020, BS EN 17092-4:2020, BS EN 17092-5:2020 and BS EN 17092-6:2020, it supersedes BS EN 13595-1:2002, BS EN 13595-2:2002, BS EN 13595-3:2002 and BS EN 13595-4:2002, which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PH/3/9, Motorcyclists Personal Protective Equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

BSI, as a member of CEN, is obliged to publish EN 17092-1:2020 as a British Standard. However, attention is drawn to the fact that during the final stages of development of the EN 17092 series, the UK committee noted that Vertical Group 9 of the European Coordination Group of Notified Bodies, tasked with addressing specific concerns regarding testing and certification of products in the field of protective clothing for motorcycle riders, had developed a number of Recommendations for Use (RfU) sheets, which have not been incorporated into EN 17092-1:2020.

The UK committee is concerned that users of this standard might develop products according to its requirements but be unaware of the additional checks that would be required by Notified Bodies, as defined in the vertical RfU sheets, which could result in products failing to satisfy the essential requirements of the Personal Protective Equipment (PPE) Regulation (EU) 2016/425, irrespective of the presumption of conformity inherent in a harmonized standard.

The UK committee therefore draws attention to the European Commission website https://ec.europa.eu/growth/sectors/mechanical-engineering/personal-protective-equipment, which provides details of existing vertical RfU sheets and recommends that users of this standard make themselves aware of any documents that relate to this version of EN 17092-1.

The UK committee would further like to note that following the publication of the EN 17092 series, EN 13595-2:2002 for abrasion resistance and EN 13595-4:2002 for cut resistance have been withdrawn. However, these two standards are dated normative references in EN 13634:2017. The UK committee has raised its concerns with CEN.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020 Published by BSI Standards Limited 2020

ISBN 978 0 580 96796 2

ICS 13.340.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2020.

BRITISH STANDARD BS EN 17092-1:2020

Amendments/corrigenda issued since publication

Date Text affected

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 17092-1

March 2020

ICS 13.340.10

Supersedes EN 13595-1:2002, EN 13595-2:2002, EN 13595-3:2002, EN 13595-4:2002

English Version

Protective garments for motorcycle riders - Part 1: Test methods

Vêtements de protection pour les motocyclistes - Partie 1 : Méthodes d'essai Motorradfahrerschutzkleidung - Teil 1: Prüfmethoden

This European Standard was approved by CEN on 25 November 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
Europ	ean foreword	3
Introduction		4
1	Scope	5
2	Normative references	
3	Terms and definitions	
4	Test samples	7
5	Test methods	11
5.1	General	
5.2	Procedure for determination and demarcation of risk category zones	
5.2.1	General	
5.2.2	Determination and demarcation of risk category Zone 1	
5.2.3	Determination and demarcation of risk category Zones 2 and 3	
5.3	Procedure to check the additional garment construction requirements	27
5.4	Test method for determination of impact abrasion resistance (Darmstadt	
	method)	
5.4.1	Principle	
5.4.2	Test criteria	
5.4.3	Apparatus, parts and components	
5.4.4	Test samples	
5.4.5 5.4.6	Performing the test Test report	
5.4.0	Determination of restraint	
5.5.1	General	
5.5.2	Restraint of impact protectors	
5.5.3	Garment restraint	
5.6	Determination of fit and ergonomics	
5.6.1	Principle	
5.6.2	Apparatus	
5.6.3	Test specimens required	
5.6.4	Procedure	
Annex	x A (informative) Determination and demarcation of risk category zones	45
A.1	Introduction	45
A.2	Description of the work	
A.3	Results	45
A.4	Tolerances	47
A.5	Conclusion	48
Biblio	graphy	49

European foreword

This document (EN 17092-1:2020) has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand arm protection and lifejackets", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2020, and conflicting national standards shall be withdrawn at the latest by March 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document, together with EN 17092-2:2020, EN 17092-3:2020, EN 17092-4:2020, 17092-5:2020 and EN 17092-6:2020, supersedes EN 13595-4:2002, EN 13595-3:2002, EN 13595-2:2002 and EN 13595-1:2002.

This standard is part of a series of standards specifying test methods and requirements for motorcyclists' protective garments. EN 17092 comprises multiple parts:

- Part 1: Test methods
- Part 2: Class AAA garments Requirements
- Part 3: Class AA garments Requirements
- Part 4: Class A garments Requirements
- Part 5: Class B garments Requirements
- Part 6: Class C garments Requirements

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is a part of a series of standards including EN 17092-2, EN 17092-3, EN 17092-4, EN 17092-5 and EN 17092-6, which describe the requirements for motorcyclists' protective garments according to the various classes of protection offered. EN 17092-1 specifies test methods to be used to test motorcyclists' protective garments to confirm that they meet the requirements of the EN 17092-2 and following parts.

1 Scope

This document describes some of the test methods for use with EN 17092 protective garments for motorcycle riders (Part 2 and following parts). It describes the appropriate test methods for zoning, ergonomics, mechanical properties and impact abrasion resistance.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 388:2016+A1:2018, Protective gloves against mechanical risks

EN 1621-1:2012, Motorcyclists' protective clothing against mechanical impact — Part 1: Motorcyclists' limb joint impact protectors — Requirements and test methods

EN 1621-2:2014, Motorcyclists' protective clothing against mechanical impact — Part 2: Motorcyclists' back protectors — Requirements and test methods

EN 1621-3:2018, Motorcyclists' protective clothing against mechanical impact — Part 3: Motorcyclists' chest protectors — Requirements and test methods

EN 1621-4:2013, Motorcyclists' protective clothing against mechanical impact — Part 4: Motorcyclists' inflatable protectors — Requirements and test methods

EN 13594:2015, Protective gloves for motorcycle riders — Requirements and test methods

EN ISO 3377-1:2011, Leather — Physical and mechanical tests - Determination of tear load — Part 1: Single edge tear (ISO 3377-1:2011)

EN ISO 4674-1:2016, Rubber- or plastics-coated fabrics — Determination of tear resistance — Part 1: Constant rate of tear methods (ISO 4674-1:2016)

EN ISO 5077:2008, Textiles — Determination of dimensional change in washing and drying (ISO 5077:2007)

EN ISO 13688:2013, Protective clothing — General requirements (ISO 13688:2013)

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp